Attorney Docket No.: Reply to Notice of Allowance of: 10/742,129
Oleg Kiselev
December 19, 2003
METHOD OF DETECTION OF DATA
CORRUPTION IN MIRRORED STORAGE
VRT0058P2US
July 18, 2006

REPLACEMENT SHEET



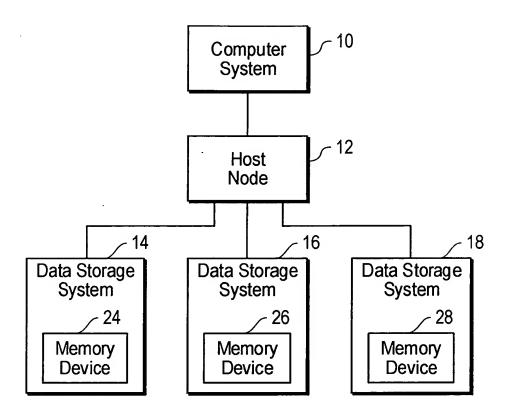
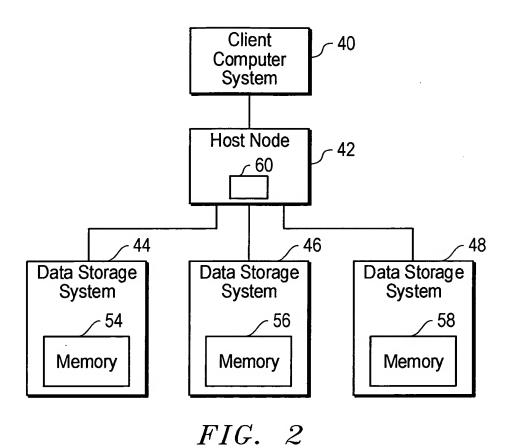


FIG. 1 (Prior Art)

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n	Data Identification	Mirror Read History	Time Stamp	
1	Block 4	M ₀	T ₀	V 66
2	Block 15	M ₀ , M ₁	T ₁	
3	Block 10	M_0, M_1, M_2	T ₂	
4	Block 27	M_0, M_1, M_2	T ₈	
5	Block 2	M ₀	T ₆	
6	Block 85	M ₀ , M ₁	T ₁₂	

FIG. 3

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CORRUPTION IN MIRRORED STORAGE Filing Date: Attorney Docket No.: Reply to Notice of Allowance of: VRT0058P2US July 18, 2006 REPLACEMENT SHEET 3, Receive request for data from client computer system 40 72 Does block ID of request No match block ID of tags in table 66? Delete 110 Yes tag having a matching 92 block ID Does mirror history of tag with Yes matching block ID indicate that requested data has been returned from all mirrors? No 94 -Is tag Yes with matching block ID stale? 74 Read requested data from No primary M₀ Read and return 100 requested data from a mirror not identified in the Return data read from mirror read history field of primary M₀ to tag with matching block ID computer system 40 Add identity of mirror to 102 mirror read history field Create new tag End Set contents of fields in newly created tag End

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FIG. 4

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tag with matching block ID

Add identity of mirror to

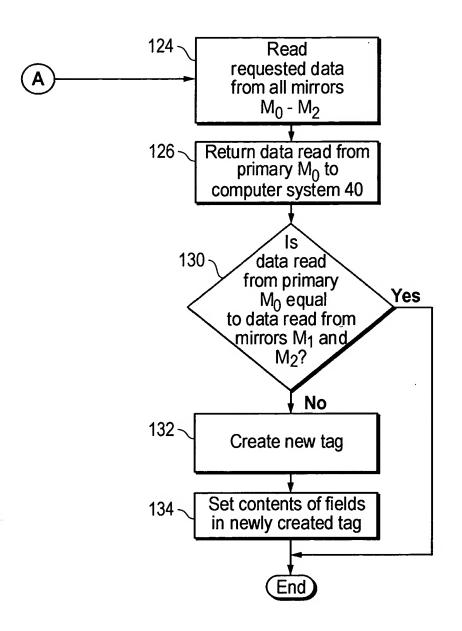
mirror read history field

End

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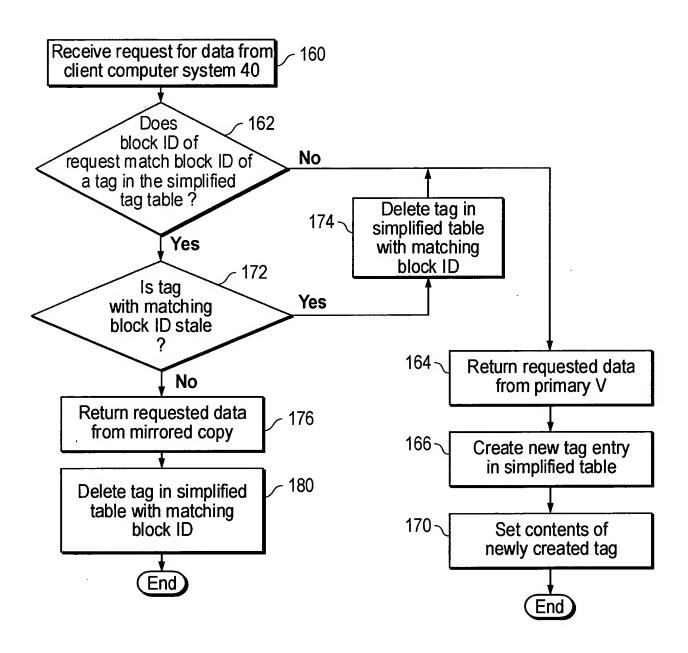


FIG. 6

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METHOD OF DETECTION OF DATA
CORRUPTION IN MIRRORED STORAGE Filing Date: Attorney Docket No.: Reply to Notice of Allowance of: VRT0058P2US July 18, 2006 REPLACEMENT SHEET Receive request for data from _ 190 client computer system 40 192 Does block ID of No requested data match block ID of a tag in simplified tag table? Delete tag in 210 simplified table Yes with matching block ID 206 Is tag with matching Yes block ID stale 194 -Read requested data No from primary V and its mirrored copy Return request data 212 from mirrored copy 196-Return data read from primary V 214 Delete tag in simplified tag table having matching block ID 200 Is requested data End Yes read from the primary V equal to its copy read from the mirror? No 202-Create new tag in simplified tag table FIG. 7 204 Set contents of fields in new tag

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